

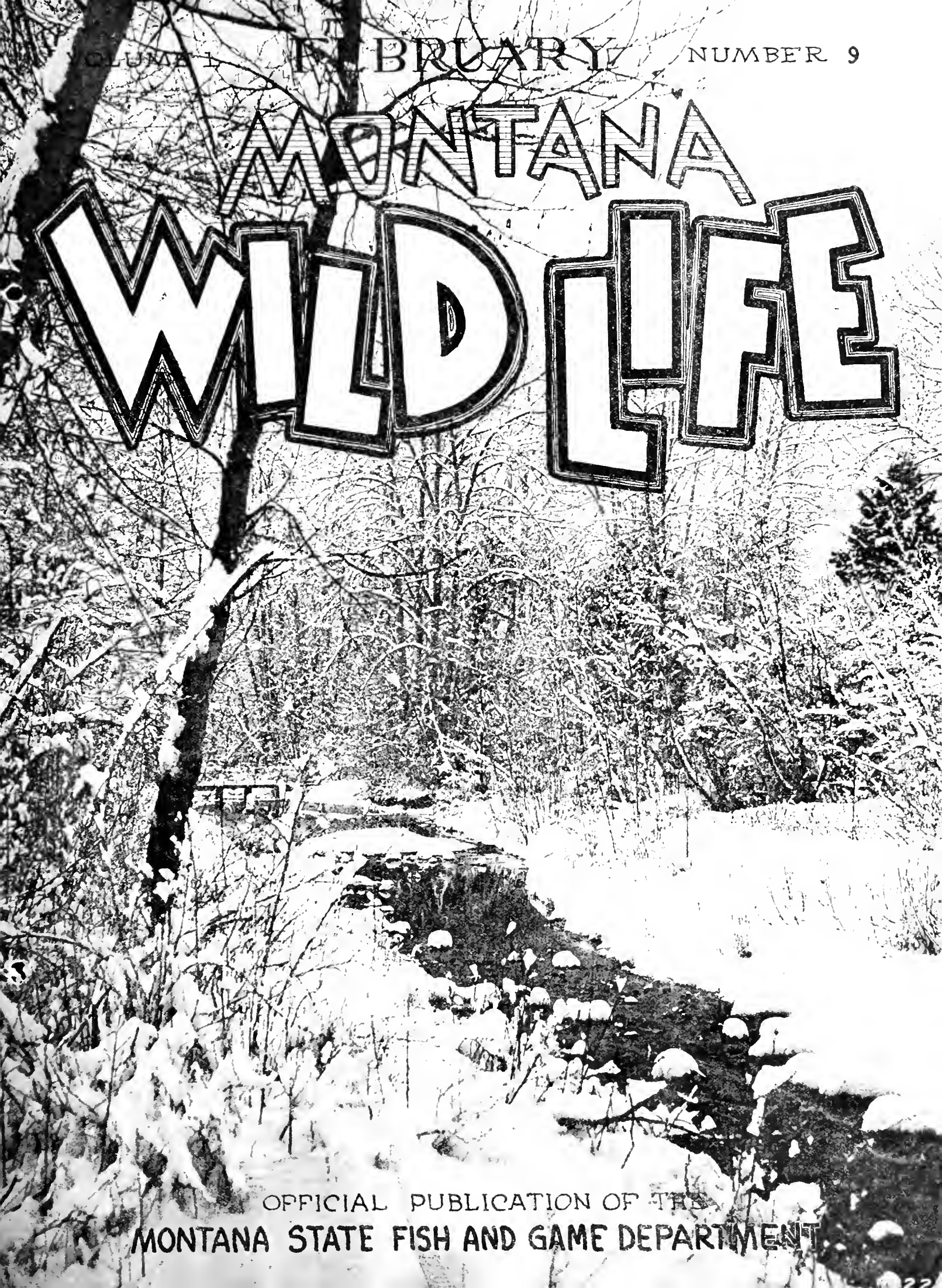
VOLUME 1

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MONTANA

WILD LIFE



OFFICIAL PUBLICATION OF THE
MONTANA STATE FISH AND GAME DEPARTMENT

Montana

BY

Alice Lee Eddy

Valier, Montana

*Montana winds are the keenest winds
Of all the winds that blow.
Montana stars are the brightest stars
That gleam on miles of snow.
An endless plain, mountain tall,
A placid lake, a waterfall,
A beauty, a grandeur prevailing all
Montana!*

*Montana skies are the bluest skies
Of all the skies I know.
Montana fields are the greenest fields,
Of all the fields that grow.
Sunshine and rain,
Metals and grain,
A land to win, a home to gain,
Montana!*

MONTANA WILD LIFE

The Official Publication of The State Fish and Game Commission

VOL. I.

HELENA, MONTANA, FEBRUARY, 1929

No. 9

State Sportsmen Launch Program

THE Montana Sportsmen's Association, threatened with trials and tribulations, still lives as the result of the sincere efforts of a group of determined members attending the annual gathering held at the Placer hotel at Helena on January 26. After two days of deliberations, the climax of the annual meeting came at the annual banquet when a report of a select committee was read announcing that the state association had been given new life and launched on a new program of vitality. The motion to ask the Izaak Walton League of America to take over the organization of chapters in Montana was voted down. For the information of Montana sportsmen, the following report of the annual meeting, supplied by Chairman Glen A. Smith of Missoula, is published in MONTANA WILD LIFE:

The meeting was called to order by Chairman Glen A. Smith of Missoula. He made a short report on the affairs of the association during the past year.

B. W. Nelson, acting as secretary for the association, read the minutes of the meeting of the governing board of the association held at Great Falls February 4, 1928, as follows:

"Chairman Smith and E. A. Wilson were present as members of the board; also Cecil V. Wilson, of Helena, representing Dr. Copenhaver, and H. M. Read of Great Falls, representing Rev. Nelson in the meeting.

"Upon motion by Mr. Wilson, Mr. Smith was unanimously re-elected as chairman of the board for the ensuing year. The matter of electing a secretary-treasurer was deferred.

"Upon motion by Mr. Read it was voted that the association pay \$15 of the cost of the fly rod presented to President Coolidge last summer.

"Secretary Carpenter presented the following program of work for the year, which, upon motion by Mr. Read, was unanimously adopted with the understanding that the more important features shall be given preference. Cooperation with the Kiwanis Clubs of Montana in establishing recreational areas throughout the state; continue work in behalf of the north herd of Yellowstone Park elk; submit a revised constitution and by-laws in accordance with action taken at the eighth annual meeting; give consideration to the plan of advertising Montana through a representative of this association in the 4-H Boys' and Girls' Clubs at the Chicago International Livestock Show;

cooperate with other agencies in keeping Yellowstone National Park and other national parks and monuments intact; bring about a correction of the boundary of the National Bison Range in western Montana; cooperate with other agencies in securing the enactment of the Forest and Wild Life Research Bill by Congress; cooperate with other agencies in securing migratory bird refuge legislation by Congress; cooperate with the Biological Survey in banding ducks, etc., in Montana; bring about the establishment of additional permanent, safe areas for ducks and geese by either state or federal agencies, the planting of these and other areas to duck foods, and the protection of adjacent forage cover to provide safe nesting areas above high-water line; re-establish the old boundary of the Gallatin Game Preserve in the vicinity of the town of Gardiner; cooperate with the Izaak Walton League in securing an appropriation with which to reclaim the Bear River marshes of

Utah; give serious attention to the 1929 legislative program with a view of seeking the fewest possible changes in the laws, the idea being to offer just as few and just as small bills as can be made to answer the demands of necessity, as it is quite likely the sportsmen will find themselves on the defensive during at least a portion of the session; organize at least one more group conference with Livingston as the central point; continue the campaign for more rearing ponds on streams to be stocked; more educational work needed to prevent the destruction of feathered friends of mankind, particularly as to hawks and owls; assist local clubs to sell their conservation programs more generally to the public; study the Powder River refuge matter with a view of working out the suggestions of Dr. Garberson relative thereto; study water pollution and kindred matters with a view of guarding against too great a sacrifice of Montana's out-of-doors to industrial development of the state; and continue efforts to have more nature study carried on in the schools.

"Those in attendance at the meeting were guests of the Great Falls Sportsmen's Association at a sumptuous dinner that evening."

Representative Ben Nelson of Malta spoke on the work before the legislature. He suggested, due to the great volume of legislation, that nothing but urgent bills be considered.

J. J. Harper read a paper discussing the advisability of the federal government operating the national forests, and the probable outcome of any attempt on the part of the state or of any private individual to take over supervision.

Dr. Howard Welch of Bozeman pointed out the fact that, if he was correctly informed, 43 per cent of the State of Montana is now exempt from taxation because of federal and state-owned lands.

President Glen A. Smith discussed Mr. Harper's paper as follows:

"I might give you a few figures just to show you what we have done in connection with providing range on the national forests for the game. The net area of the national forests in Montana at this time amounts to 15,872,456 acres, of which 937,398 acres are closed to grazing or are in state and national game preserves. This amounts to 6 per cent of the total area of the national forests. There is waste range, that is, so far as livestock is concerned, amounting to 7,837,421 acres. A gross

Lion and Lamb?



Puzzle: Find the Chipmunk

LAMBS may lie down alongside lions. Montana chipmunks may also take a chance with the family dog. Here's proof that a wee denizen of the woods has made a friend. This unusual photograph showing the strange friendship was taken by Howell McKay, 312 Cedar, Anaconda, for readers of MONTANA WILD LIFE. He writes that the chipmunk, which fostered the friendship of the dog and is seen perched on Towser's head, oftentimes has become so rough with his playmate that Towser closed his eyes while resting to avoid a scratching.

area of 8,869,273 acres is set aside and used only by game, including preserves, inaccessible range and areas closed to domestic stock. This amounts to 56 per cent of the total area of national forest land in Montana.

"A careful study of the game situation in Montana, both from the summer and the winter standpoint, shows that purely summer range occupies about 11,000,000 acres of the national forests, while about 4,810,889 acres, or 30 per cent, of the national forests may be considered as winter range, as against 70 per cent used as purely summer range. This in general is the situation. The above will give you an idea of the necessity of providing winter range outside the national forests. We have ample summer range for game everywhere, but some time when you are out in the mountains during the summer just try and picture the conditions encountered during the winter months. If we could properly distribute the winter range where the game animals are, or divide it up properly with the summer range, all would be well but in many cases winter range in public ownership adjacent to summer range in public ownership is wholly lacking.

"The stockmen have their side of the matter and the sportsmen have their side. True cooperation is the only way in which the matter can be adequately handled. I like to think of it in these terms, that 'cooperation comes to its finest flower in a spirit of trust of the

other fellow and very quickly dies in a spirit of distrust.' If we are going to cooperate, we have to cooperate on thinking that the other fellow has his side of the question just the same as we have.

"Several years ago the Forest Service made a careful study of the lands in the national forests that would be capable of carrying taxes, that is, that an individual would pay taxes on. The question as to what the taxes would amount to if this untaxable land now in the national forests should go to private ownership, or the question how much would be gained from placing the already untaxable property into private hands, it was found under the present system of assessment and taxation that the taxes to be derived from the now untaxable property in the national forests would be in the neighborhood of some \$342,000. This situation would exist as long as the lands were capable of producing revenues and would therefore justify any one paying taxes.

"I want to call your attention at this time to Benewah county in Idaho. This county was the cream of the white pine and cedar forests of the United States. Years ago a great majority of it passed into the hands of private individuals, and during the past twenty-two years lumbering has been in full sway. The great majority of the private forests is now cut over or burned and is in a state of low productivity. Thousands of acres annu-

ally come back to the county for delinquent taxes. The owners who placed their money in it can't see anything further for it. It is a perfect waste, and unless some county, state, federal or public agency takes this land over and starts a new forest, which will take a long time, it will continue more or less idle land. Private capital can not see any investment in it because private capital can get good bond securities bringing in 6 or 8 per cent, and can not see the benefit to be derived to them personally from regrowing a forest, which would take some 75 or 100 years.

"Just for example, let us take what would happen here in our own territory. Referring to the taxable property you might get in time to come, after all these lands have passed patent, around \$350,000 in taxation. Now what is on the other side? Under the federal law 25 per cent of the gross income goes to the states in which these forests are located. At the present time about \$70,000 comes back to the state for schools and roads. For the present you would get more if the lands were taxable but the income from the national forests is bound to increase as the uses of them increase, which is conservatively estimated for the future at about \$250,000 per annum.

"The revenues are received from grazing, timber sales, recreational uses, and other special provisions which are bringing in revenues. The state receives 25 per cent without any supervision or assessment, just handed to it without expense of any kind. In addition to this, I think that last year there was expended in the State of Montana on forests, highways, trails and roads necessary to open up national forests, building roads between communities, the sum of \$1,400,000 and as time goes on we can probably expect an increase for the construction of roads and trails within the national forests. If the state had to build these roads, trails and other improvements necessary for the protection and development and furnish the necessary administrative expenses, and stock the streams, how far would \$400,000 go? In addition the cost involved from protecting the national forests costs the government around \$1,000,000 a year for supervision and protection, as against the \$400,000 the state would receive if they undertook the supervision of the national forests they would have to put into the administration and development of the lands the sum of two or three million dollars annually. Therefore, I do not see how the State of Montana can afford to own the national forests, and therefore this must be a national and not a state problem.

"Montana has considerable forest land and will probably have more in the future as it may become necessary to take over some lands now in private ownership, the owners of which may decide that the burden of taxes is too great and desire that the state take them over. So there is ample room for both the state and federal governments to carry this big problem of keeping the forest lands of the state in a productive state.

"Pennsylvania last year passed a bond issue of \$6,000,000 to acquire timber

Bottle Fed Babies Thrive in Montana



MONTANA sportsmen generally are over-eager in protecting the supposedly lost fawn, but when permission is secured from State Department headquarters, these little animals, in danger of being attacked by predatory animals, have been left temporarily in the care of their rescuers. Many times a fawn believed lost is but hidden by the doe and the touch of human hands causes the doe to desert it. If left alone it will usually find the mother. In the above picture are shown three interesting snapshots. The whitetailed fawn "Miss Snookums," shown in the lower pictures, was found

in a log jam on the north fork of the Flathead river. At the right it is shown being fed from a bottle by Mrs. Charles Waters of Trail Creek, Mont. At the right is shown the same fawn at seven months of age, eating from the hand of Charles Waters. In the circle above is shown an antelope fawn which William Kruse of Trail Creek raised in southeastern Montana. The whitetail fawn ate anything from soap to chewing tobacco and fish hooks, making itself at home when the door was open. It finally left home and was seen no more.

land in that state. This land was at one time privately owned. This is an important matter in Pennsylvania as they pay out something like \$15,000,000 a year in freight on lumber that is shipped into the state. Under the present system in Montana with our national forests we will never need to import any lumber into the state, so Montana is in the position of having Uncle Sam grow timber at home in order to save the freight on lumber coming into her state. Based on a per capita basis, Montana now owns more state land than Pennsylvania."

Frank Rose gave a talk on the banding of ducks and the work accomplished by the Biological Survey and urged that the work be continued.

Chairman Smith appointed a resolutions committee consisting of W. C. Phillips, Dr. J. H. Garberson and Dr. Welch of Bozeman, which committee was to adopt a resolution to encourage the furthering of the work of the Biological Survey.

Dr. J. H. Garberson read the following report, and it was moved and seconded that the resolutions be adopted:

"Be It Resolved, That the Montana Sportsmen's Association go on record as urging the passage of the Norbeck Bill now under consideration by Congress, and that the Montana senators and representatives be notified of this resolution, and

"Whereas, The work of the Biological Survey on the Bison Preserve of Montana in banding ducks and recording their migratory movements appears to be furnishing data invaluable to a survey upon which regulatory measures must be based; and

"Whereas, This work is of such importance that it should be further expanded and developed; and

"Whereas, This said work has been somewhat limited due to a lack of funds and has only been possible in its present scope due to the unselfish donation of time and labor by Mr. Rose.

"Now, Therefore, Be It Resolved, That the Montana Sportsmen's Association, assembled at this their annual meeting in Helena, urge that Congress adequately provide for enlarging the scope of this work and insure its continuance over a sufficient period of time to give the data collected its proper value; and

"Be It Further Resolved, That copies of this resolution be sent to each senator and representative, to the headquarters of the Biological Survey, and to the press."

Fred Williams of Bozeman made a motion to the effect that the Montana Sportsmen's Association recommend to the legislature that the season for elk be extended fifteen days, and to allow the killing of one deer of either sex in Gallatin county, but that this season could be closed at any time upon five days' notice being given by the State Fish and Game Commission. A substitute motion was made that no changes in the game laws be recommended to the legislature by this association.

A substitute to this substitute motion was made that this association recommend to the legislature a bill empowering the State Fish and Game Commission to open and close all seasons in

various localities as it might deem proper.

After some discussion, a vote was taken on the second substitute motion and was defeated, after which a vote was taken on the first substitute motion, which carried.

Secretary Nelson read a resolution adopted by the executive board of the Montana Sportsmen's Association at its meeting January 25, 1929:

"Moved that it be the sense of this meeting that the governing board recommend to the general meeting of the Montana Sportsmen's Association that the said Montana Sportsmen's Association affiliate with the Izaak Walton League of America provided that the Izaak Walton League will agree to furnish the desired cooperation in organizing the local clubs as Izaak Walton chapters, and further that it be the recommendation of the Montana state association to the local clubs that said affiliation be effected."

Secretary Nelson read a telegram forwarded to the Izaak Walton League at Chicago, Illinois, and their answer:

"Chicago, Ill., Jan. 26, 1929.

"Glen A. Smith, Montana Sportsmen's Association, Helena, Montana:

"Wish to congratulate executive board of Montana Sportsmen's Association on

wisdom of resolution. Walton League plan of organization is governed by a policy of producing the greatest results most economically. The league will be very glad to cooperate in the following fashion: By working with the present executive officers of the association in enacting the transition. Further it will carry on the preliminary work with the various local units by mail, instructing them how to make the transition and when and if sufficient response has been developed will personally assist in the development of a state body and give further personal effort for a limited time to solving local situations and developing a program of activities. This cooperation is predicated on the basis of a membership with minimum of four or five dollars, divided one or two dollars to the chapter, one dollar to the state and two dollars for national requirement which includes a full year's subscription to Outdoor America for each member. Minnesota, Wisconsin and various other most successful states have been developed by this process. Will be glad to hear and amplify further. Fred H. Doellner."

There was considerable discussion by members as to the advisability of adopting the resolution, and after due deliberation a vote was taken. Only

The Grateful Man by Constance Marion Simpson

He hit my camp on a rainy day

A-coming from God knows where,

With a busted place in his overalls

And hurs in his tangled hair.

He wasn't a fop, and he wasn't a dude,

But he surely was kind to me,

When he said that my method of cooking beans

Was the finest he ever see.

Now don't forget that the hills are high

And the lone days wide between,

Till a man forgets that he's got a tongue,

And his starving soul grows lean;

For God he put in the first man's heart

The longing for human praise;

And down through the millions of changing years

That hankering stays, and stays.

I hedded him down the best I could,

And showed him the whisky jug.

I didn't sleep good on the ground that night

But the stranger was warm and snug;

I didn't sleep good, but I didn't mind,

For I listened to what he said,

When he swore that my blankets reminded him

Of his grandmother's feather bed.

Oh! he was the gratefullest man, I think,

That ever came up the pass;

He praised my claim, and he praised my grub,

And he bragged on my old jackass;

He praised the coffee I brought to him Before he was out of bed,

Till my worn-out hat got far too small For the size of my swelling head.

He stayed and stayed, till the spring sun came

And the hill slopes all turned brown,

And the drab flood rifled the old sluice box

With the snow thaw coming down;

Then he went away; I was needing help,

For the bacon was low you see, And the sluicing waters they don't last long;

But he'd been so kind to me.

He'd been so kind that I couldn't bear

To mention, you understand—

That I needed help; so he shed some tears,

And gratefully shook my hand;

Then he borrowed my shovel, and frying pan,

Tobacco, and grub, and then—

Went singing away up Old Three Fork,

And he never came back again.

He never came back, but he struck a lead

At the forks of Little Bear,

A six-foot lead of the Peacock Blue;

And now he's a millionaire.

I met him once, plumb face to face,

On the Wolf Creek road last fall;

He looked my way as his car went by, But he never saw me at all.

He never saw me, and my feelings ached,

As I stood in the dusty trail.

A cheery grin—it was all I asked—

And maybe a friendly hail;

For the hills are high, and the hours are long.

And the lone days wide between;

I wanted a grin—and all I got—

Was the stink of his gasoline.

Well, I suppose, there's a lot of things When a fellow's a millionaire

That fill his mind, till his poor old friends

Are crowded clean out of there;

Yet, once he was terribly kind to me;

He's rich, and I sure am glad—

But I wish he would bring my shovel back,

'Cause I'm needing it awful bad.

the clubs in good standing had the privilege of voting, each casting two votes as follows: Against, Laurel, Big Timber, Augusta and Red Lodge. For the adoption of the resolution, Miles City, Libby, Billings and Great Falls. The vote being a tie, the chair declared the motion lost.

A motion carried "That this meeting express complete confidence in the present governing board, and that they especially wish to ask every one of the members to continue in his respective position to help work out the problems of the association, and that any members whose terms expire this year be re-elected for the ensuing year."

A report was submitted by Sam T. Woodring, Chief Park Ranger of Yellowstone National Park, as follows:

Comparative reports of elk killed by hunters in Gallatin and Park counties, Montana, showing percentages of losses on counts secured during the years 1924 to 1928, inclusive (5 years):

Gallatin Herd—1924, 190; 1925, 162; 1926, 121; 1927, 78; 1928, 81; total, 632. Yellowstone-Lamar River Herd—1924, 366; 1925, 88; 1926, 719; 1927, 1529; 1928, 15; total, 2717.

The average number comprising the Gallatin herd during this period was 2500 head; the average number killed annually by hunters was 126, showing a loss of 5 per cent of the herd total.

The average number comprising the Yellowstone-Lamar River herd during this period was 17,350 head; the average number killed annually by hunters was 542, showing a loss of 3 per cent of the herd total.

Financial Statement, 1928

Receipts

Laurel	\$ 13.75
Big Timber	13.50
Moccasin	17.50
Hobson	9.50
Augusta	9.50
Forsyth	2.00
Twin Bridges	11.25
Harlowton	14.00
Miles City	72.25
Libby	20.00
Billings	95.00
Tobacco Valley	23.25
Great Falls	19.25
Rosebud	5.25
Red Lodge	22.75

Total \$378.75

Disbursements

Secretary's Salary:	
January	\$ 5.00
February	40.82
March	30.00
April	22.20
May	12.60
June	9.25
July	35.00
August	57.43
Total	\$213.30
Travel expense of secretary	2.36
Salary of stenographer: Jan., \$11.00; Dec., \$2.50	17.10
Postage	24.30
Office supplies	28.60
Auto license, taxes, insurance	12.73
Telegrams	31.20
Printing	77.20
Total	\$196.79
Total disbursements	409.59

Receipts, 1928

Cash on hand Jan. 1, 1928	\$108.81
Club dues, 1927	44.90
Club dues, 1928	378.75
Great Falls Club donation to elk program	10.00
Total	\$542.46
Disbursements	409.59
Balance Jan. 26, 1928	112.87

At the annual banquet of the association, served at the Hotel Placer grill, the resolution was presented and adopted which assures the continued functioning of the association with renewed vigor during the coming years. The resolution was read by Fred Williams of Bozeman and was prefaced by his remark: "The Montana Sportsmen's Association still lives." It was prepared by the committee of leaders appointed by Chairman Glen A. Smith after extended deliberation. The resolution provides that the organization shall function hereafter with dues of the membership increased from 25 cents to 50 cents, selects MONTANA WILD LIFE as the official publication of the organization, requests that the subscription price of the magazine established and published by the State Fish and Game Commission be increased to \$1 and urges the employment of a full time secretary whose duty it shall be to organize clubs, solicit subscriptions for MONTANA WILD LIFE and continue the work of the sportsmen.

Safe in Protecting Arms



Forest Ranger Fitzgerald with a deserted fawn in the Bitter Roots.

JOHN P. SHEEHAN of the state fish hatchery at Hamilton submits the above photograph taken in the West Fork country of the Bitter Roots where the ranger and a trail crew found the fawn deserted by a doe. He writes that deer in that district are not in good shape because of the activity of a house. Sulphur salt is being put out and the deer that come to the licks are wintering in good shape. Lice and ticks are seemingly driven off the deer by the salt.

It Cures His Ills

Editor MONTANA WILD LIFE:

I write to tell you how much I have enjoyed MONTANA WILD LIFE. It seems to me that I have never read anything relating to the woods and streams that is comparable to the last issue of your wonderful publication. It happened to reach me in a sick room and has been a wonderful agent in accomplishing a good deal of physical rejuvenation in me. This periodical reaches me through the courtesy of Dr. Morton J. Elrod, a long time friend.

HENRY M. HART,

Principal, Butte High School, 1903-1907.

Principal, The Lewis and Clark High School, Spokane, 1907-1929.

Venison in 1878

Think of a market price of 5 cents per pound for buck deer, 6 cents for does and venison saddles at from 9 to 10 cents, the prices at which such meat was selling legally on the St. Louis market in December, 1878. Then consider the earnest effort now being made to reproduce deer.

The St. Louis Post and Dispatch of December 12, 1878, gives the following interesting game quotations for that date, exactly fifty years ago:

"GAME"—In much larger receipt and generally lower; demand less active; receipts in good condition. Sales: Grouse at \$2.75-\$3—latter selected; pheasants dull at \$2.75-\$3; quail at 75c round; selected undrawn \$0-\$5c; rabbits 70-\$9c—latter for large ill.; squirrels at 30-40c; ducks at \$2 for mallard, \$1.50-\$1.75 for teal, \$1.25-\$1.50 for mixed; pigeons 10-15c; deer at 5c per pound gross for bucks, 6c for does—venison saddles 9-10c—latter dressed; wild turkeys at 5-6c per pound; 'possum 5c to 15c each."

A Word from Wisconsin

Editor MONTANA WILD LIFE:

We can no longer refrain from writing to compliment you on the excellent publication, MONTANA WILD LIFE, which you are putting out in the interest of wild life conservation and preservation in your state and elsewhere.

The January number is particularly well edited and beautifully illustrated. It is very interesting from cover to cover and makes a mighty favorable impression on sportsmen and outdoor enthusiasts wherever it is read.

But best of all, the strong logic of your arguments is converting all decent men to see hunting and fishing privileges in a higher and fairer light, and unifying the citizenry of our land in the matter of law enforcement. We believe the bandit fisherman is doomed to extinction. He will soon find too much against him. Systematic organized game protection is sure to win the day. We congratulate Montana on its work along this line. It is pointing the way for sister states to follow. Best wishes.

W. N. HEDBACK,
President and Manager, Island City Silver Fox Co., Cumberland, Wis.

Montana to Mark Closed Streams

MONTANA'S closed streams and game preserves are to be properly marked with attractive metal signs, through initial steps taken by the State Fish and Game Commission at its last regular meeting on January 29. The purchase of 5,000 metal signs, 3,000 for the game preserves of the state and 2,000 for the closed streams, was authorized by the Commission with the matter placed in the hands of Chairman Thomas N. Marlowe of Missoula. Bright, striking colors, easily visible to the angler or hunter, will be painted on these signs intended to serve as a double warning.

During the afternoon the Commission adjourned to meet in joint session with representatives of the Montana Sportsmen's Association at the Placer hotel, it being the annual gathering of the association. In the evening members of the Commission attended the banquet with representatives of clubs of sportsmen.

At the Commission meeting Game Warden Hill read a letter from Paul Arnett, commercial fisherman at Flathead Lake, protesting against the recent order of the Fish and Game Commission amending the rules and regulations governing commercial fishing at that lake. Mr. Arnett advised that to have a seine at a depth of not less than thirty feet would eliminate all whitefish and Dolly Varden trout fishing, as they live in shallow waters. The matter was laid on the table until a future meeting.

Mr. Hill read a letter from John Tansil, attorney at Billings, asking that the Commission open Mollins Lake, in Yellowstone county, to seining. It is the desire of Elso McCracken to seine this lake to get rid of the bullheads so that game fish may be planted. The matter was referred to Commissioner W. K. Moore for his consideration and investigation.

The Commission went on record favoring the Norbeck game refuge bill, and Game Warden Hill was instructed to wire the congressmen from Montana to this effect, write letters to the secretaries of the rod and gun clubs and do everything possible to see that this bill comes up for consideration before the present session of Congress adjourns.

Chairman Marlowe read a letter from the Libby Rod and Gun Club asking that the Commission pay a bill for paint used on the Libby hatchery. Ed Boyes advised that when the hatchery was built it was not painted. The members of the club painted the building, oiled the floors and built a flume from the hatchery to the creek. The bill was allowed and the Libby Rod and Gun Club given a letter of thanks.

Chairman Marlowe read a letter from the forest supervisor of Flathead national forest asking that a trap be put in Holland Lake, in the Clearwater country, to take out squaw fish. As soon as the weather and road condi-

tions permit Deputy Warden Bergan was instructed to take traps to Holland Lake.

Mr. Marlowe read a letter from Senator George Cooper of Mineral county stating that that county needed rearing ponds along the streams in view of the fact that many Idaho sportsmen fish in that county consistently. Mr. Marlowe and Dr. I. H. Treece were instructed to investigate and take such action as is necessary.

George Mushbach of Billings, United States game protector, reported that he

had been instructed by the U. S. Bureau of Biological Survey to confer with the Commission relative to the Benton Lake district near Great Falls, and to investigate this territory with the view to having it withdrawn by executive order and made into a migratory bird refuge.

He also discussed the acquisition of Big Lake, in Stillwater county, which covers approximately 19 acres, for refuge purposes. Part of this lake is owned by the state, part by the federal government and another section by the Northern Pacific Railway Company. Mr. Moore, Mr. Hill and Mr. Mushbach were appointed to look into the plan of creating a refuge at Big Lake in Stillwater county.

Mr. Mushbach asked the Commission why they objected to the creation of a federal game preserve on the Miles City Fort Keogh grounds, which objection the Commission had made in a previous meeting. The Commissioners advised that they did not want to jeopardize capital they had invested in the Miles City food cultural station by allowing the creation of a federal refuge on the same grounds. Mr. Mushbach said there would be no such danger. On motion of Mr. Marlowe the Commission reconsidered the previous action and went on record as being in favor of the creation of a federal refuge on these grounds, and decided to take up the matter with the U. S. Bureau of Biological Survey in Washington, D. C., relative to making a federal refuge on this territory, it being understood that the request will not in any way interfere with the rights of the State of Montana and the Fish and Game Department.

Kenneth MacDonald advised that the fish troughs at the Libby hatchery are in poor condition and was instructed to ship redwood from the Anaconda hatchery to Libby to be constructed into troughs.

Representative Henderson of Granite county brought a message from the Granite County Anglers' Club, asking that the hatchery at Rock Creek be enlarged and additional troughs made, inasmuch as so much fishing is done in that part of the state that more fry are needed. Mr. MacDonald was instructed to send additional eggs from Anaconda to the rearing ponds at Rock Creek and investigate building other ponds at Rock Creek to take care of the need for additional eggs.

Commissioner E. A. Wilson advised that he had attended a meeting of the advisory board of the Dude Ranchers' Association and that they had told him individual members of their association would willingly build rearing ponds on streams on their properties at their own expense if the Commission will secure fry to plant in these ponds.

Elegy Written in a Tourist Camp Ground

The klaxon sounds the knell of parting day,

Some late arrivals through the dust clouds creep,

And three hours after we have hit the hay

The noise calms down so we can get to sleep.

Save where, from yonder pennant-clad sedan,

A radio set emits its raucous squeal. And, underneath a nearby light, a man Pounds until daylight on a busted wheel.

Beneath those tattered tops, those patent tents,

Where falls the dust into each sun-burned pore,

Each on his folding bed of slight expense,

The rude explorers of the highway snore.

Let not ambition mock their creaky cars,

Their khaki clothes, of vintages obscure,

Nor grandeur view, with hauteur like a czar's,

The short and simple flivvers of the poor.

The boast of shiny paint, the pomp of power,

And all that charms the moribund fop.

Await alike the inevitable hour—

The paths of touring lead but to the shop.

Can streamline hood or silver-plated hubs

Back to its mansion call the missing spark?

Can plush upholstery foil the clumsy dubs

Who bang into your fenders in the dark?

Full many a boob of purest ray serene

Succumbs each summer to the touring itch;

Full many a car is doomed to blush unseen,

And waste its sweetness in a western ditch.

—Stoddard King.

MONTANA STATE FISH AND GAME COMMISSION

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VOLUME I FEBRUARY, 1929 NUMBER 9

CONGRESS PASSES BIRD REFUGE BILL

MONTANA sportsmen and bird lovers will rejoice at the passage of the Norbeck-Andresen Bird Refuge Bill by Congress. The importance of this measure does not lie in the \$8,000,000 authorized for the purchase of marsh and swamp lands for migratory bird sanctuaries, but in the fact that the government is now definitely committed to a policy of establishing a system of inviolate refuges for the persecuted wildfowl and insect-eating birds of America.

This bill passed the Senate last April under the guidance of Senator Peter Norbeck of South Dakota, and until recently it reposed in the House Committee on Agriculture. It was generally regarded as hopeless to secure final action at this short session of Congress; furthermore, it was supposed that the Bureau of the Budget would not approve any new undertaking involving additional expenditures of public funds.

Passage of this bill followed one of the most intensive and best coordinated campaigns ever waged in the interest of any measure for the conservation of wild life. It is estimated that more than 200,000 supporting letters and telegrams poured into Congress from all parts of the United States during the last three weeks, many of them from Montana.

This successful campaign was conducted under the leadership of the National Committee for Wild Life Legislation, which officially represents all the large conservation organizations of the United States and the state conservation officials. The committee consists of Dr. T. Gilbert Pearson, President of the National Association of Audubon Societies, chairman; Carlos Avery, President of the American Game Protective Association, vice-chairman; Seth E. Gordon, Conservation Director of the Izaak Walton League of America, secretary; Dr. John C. Phillips of Boston, treasurer; George D. Pratt, President of the American Forestry Association; E. Lee LeCompte, Baltimore; R. G. Parvin, Denver; I. T. Quinn, Alabama; I. Zellerbach, San Francisco; Gustavus D. Pope, Detroit; and Keith McCanse, Missouri.

PACK AWAY YOUR TROUBLES

IHAVE told you of the man who always put on his spectacles when about to eat cherries, in order that the fruit might look larger and more tempting. In like manner I always make the more of my enjoyments, and, though I do not cast my eyes away from troubles, I pack them into as small a compass as I can for myself, and never let them annoy others.—Robert Southey.

PROTECTING THE BIRDS

CREATING refuges or sanctuaries is proving more effective than legislating against hunting in the preservation of birds. Urbanization of many broad regions is destroying lakes, swamps, streams and forests which are breeding places, havens and feeding grounds of wildfowl. The sweep of a forest fire, the draining of a lake and consequent loss of shelter for game destroy more birds than the unethical hunter and predatory animals. If gaps made in the flocks of game birds every hunting season are to be filled during the breeding season man must see to it that adequate breeding grounds are preserved or, if destroyed, restored or supplanted by new ones. Montana's Commission is taking such steps.

Wherever conditions are adapted to their requirements wild creatures will be found. Destroy their refuge and they will not return until it has been restored. Restore an old sanctuary and birds and other game will return as if by the call of some supernatural voice.

All know how easily one can attract wild birds to town yard or country garden by providing food, drink and protection regularly. They are quick to learn where they are wanted and just as instinctively know where they are unwanted.

Some men are tractors, others only brakes.

MONTANA HARVESTS FISH EGGS

WESTERN OUT-OF-DOORS, published at Portland, Ore., says: Oregon lays claim to the largest rainbow trout egg-taking station in the world—that at Diamond Lake—where from seventeen million to twenty million rainbow trout eggs are taken each year, eyed and shipped to the various hatcheries for further development; but Montana, doubtless, has the largest miscellaneous game fish egg-taking station in the world.

At Flint Creek station where Flint Creek empties into Georgetown Lake near Anaconda, the State of Montana recently completed a six-weeks harvest of 39,258,734 eggs. This consisted of 25,019,458 native or cutthroat trout eggs, 390,456 rainbow trout eggs and 13,848,820 grayling eggs. Sportsmen must not confuse the latter with the so-called grayling of Pacific coast waters. The Montana grayling is a highly prized fish, resembling the trout and is fully its equal from either a sportsman's or an epicurean's standpoint. It rises savagely to a fly and puts up a great battle when hooked. It frequents swift mountain streams but also finds cold, clear lake water to its liking. We are told that the Oregon Game Commission is introducing this species to our waters. This is as it should be as *Thymallus montanus* is reputed to live peaceably with his neighbors and should be a valuable addition to our game fishes.

OREGON LARKS TO HAWAII

HAWAIIAN ISLANDS are not as rich in bird and animal life as the mainland of North America. There are many species of interest and value but Americans who have adopted Hawaii as their home have missed the American meadowlark; consequently, arrangements have been made for the shipment of fifty pairs of Oregon meadowlarks to the Hawaiian Islands. The meadowlark is desired in Hawaii not alone for its cheerful and beautiful song but for its economic usefulness in destroying insect pests. The State Game Commission of Oregon has been requested to trap and supply the fifty pairs of larks desired, with the approval of the U. S. Bureau of Biological Survey.

AMERICA'S GREAT OUTDOOR HERITAGE

WHILE the average gunner may look upon game as something which, like Topsy, "jest growed," the naturalist, the conservationist and the expert on game protection and increase must take many diversified factors into consideration, in order that the shooting may be worth while to either the fully-accounted sportsman who hunts for the pleasure of it or the "single-gallus" hunter bent on stocking the family larder.

That the game question is many-sided was apparent to those who at the recent National Game Conference heard discussions on the relation to game birds and game animals of ice age glaciers, airplanes, automobiles, coyotes, hawks, sludge from oil tankers, Canadian gold strikes, weather and what-not.

This notable conference brought together for the first time representatives of practically every national organization interested in game and fish conservation and restoration, and related subjects such as forestry, streams and the outdoors in general. Thirty-six states were represented, also Canada, England and Japan. Federal officials and a number of Canadian officials participated in the deliberations of the great meeting which was held under the auspices of the American Game Protective Association.

As to what long-extinct glaciers have to do with game birds, Aldo Leopold, an authority, stated that the ring-necked pheasant seems to thrive best on glacial soil in Ohio, Iowa, Michigan and other states. Just why this should be the case was left an open question. Less mystery attaches to the statement by a government representative and by George D. Pratt, chairman of the conference, that roaring airplanes seriously disturb both game birds and game animals in their wilderness habitats during the breeding season and at other times.

The automobile was pointed to as making accessible the natural retreats of game in isolated sections far removed from railroads, and where formerly the taking of game was limited to that required by dwellers in the backwoods. Coyotes were charged with many depredations against big game and even game birds in Alaska, the last stronghold of American game. Defended for the good they do in destroying rats and other vermin that prey on birds' eggs and fledglings, on the one hand, and condemned for attacks on birds and small game animals, certain hawks came in for marked attention. The influx of prospectors, miners and camp-followers in parts of Canada often resulted in destruction of game and wildfowl without restraint, it was asserted. Adverse weather conditions came in for their full share of condemnation because of the effects on game of practically every character.

However, the thing which loomed largest in the minds of observers at the conference was that a spirit of co-operation and coordination of efforts was apparent on the part of associations, societies and other organizations seeking the same end—that of preserving or restoring America's great outdoor heritage.

NATURE LOVERS AID WITH FINANCES

CRITICISM is often heard among sportsmen that members of ornithological societies, demanding as much in the matter of protection from game wardens as the sportsmen themselves, contribute nothing to the salaries of those men who patrol the game fields and prevent the killing of song and insectivorous birds as well as the game species. That there is some merit in this criticism is without question. The nature lovers who have no particular interest in the interests of sportsmen are aided in many ways by the moneys paid into the division of fish and game by licensed shooters.

Even in the educational work carried on by the division there is as much stress put on the protection and conservation of non-game species as upon the game species. There has been some criticism, too, of this fact. But sportsmen are only too glad to cooperate with any group interested in conservation, even to the extent of putting up financial backing.

With the creation of game refuges there is little doubt that the non-game species are aided just as much as the game species. It is also true that with the increased number of game refuges and sanctuaries the patrol service is handicapped by having more territory requiring strict vigilance placed under its care.

ANTI-STEEL TRAP LEGISLATION

LEGISLATIVE bodies are now in session in most of the states and in many of them the law makers are called upon to pass on proposed legislation to curtail the use of the steel trap in taking fur-bearing animals. The steel trap is opposed by the American Humane Association as an inhumane device for taking fur-bearing animals and legislation has already been secured through the influence of this organization in some states to restrict its use.

The question is one which can not be determined wholly on the basis of sympathy for the animals which are taken for furs. Trapping is necessary and it is desirable to have it done in as humane a manner as possible. To this end the National Association of the Fur Industry has offered a reward of \$10,000 for the invention of a device satisfying the trappers' requirements and at the same time those of the humanitarians. An annual prize of \$150 is also offered by this organization for the greatest advance toward the mutually desired objective.

Sportsmen should be keenly interested in the progress of this sort of legislation. Fur-bearing animals constitute a tremendously valuable commercial product and they also, where uncontrolled, constitute a serious menace to game and other desirable forms of wild life. The interest of sportsmen is to maintain control of such fur-bearing animals as are commonly known as "vermin" and prevent their undue increase in numbers. The interest of the trapper is to have fur animals in abundance; therefore, a happy medium must be sought.

If you cannot work for more fish and game, at least help finance those who are willing to work.

PHEASANT DESTROYS BEETLES

ANOTHER use has been found for the Chinese ring-neck pheasant. Game commissioners of Pennsylvania have announced that proof has been found that the ringneck pheasant feeds on Japanese beetles, one of the most serious insect pests found in eastern United States. The stomachs of numerous birds which have been killed have been examined and found to contain hundreds of these destructive insects. It has also been shown that the starling, an otherwise unpopular introduced alien bird, feeds on the Japanese beetles. The skunk has also been observed eating the same insects. The Japanese beetle, brought to America in some imported Japanese plant, has become established in certain parts of the east and has grown to be a most dangerous pest to agriculturists and horticulturists. Its devastations include orchards, vineyards, gardens, shade trees and all manner of useful plants.

CONSERVATION URGED BY VICE-PRESIDENT

AMERICA'S finest demonstration of pure idealism and unselfish patriotism is the conservation movement, in the belief of Charles G. Dawes, vice-president. In an address over a nationwide radio hookup General Dawes said:

"Those who adhere to conservation solely for the love of the out-of-doors, who comprehend their duty only in terms of planting a tree, purifying a stream, protecting a bird's nest or otherwise making the out-of-doors a little cleaner or more beautiful, have justification enough for their work and reward in their accomplishments.

"But there is another aspect of conservation that challenges the attention of 125,000,000 Americans, and that is the economic. On these grounds alone we may call upon self-interest of our people and justify all the time and energy expended in a conservation movement."

Vice-President Dawes deplored the depletion of the forests without reforestation, the pollution of streams and the lack of attention these things have felt from the people and makers of laws.

FEAR INSURES FAILURE

TO BE ambitious for wealth, and yet always expecting to be poor; to be always doubting your ability to get what you long for, is trying to reach east by traveling west. There is no philosophy which will help man to succeed when he is always doubting his ability to do so, and thus attracting failure. No matter how hard you work for success if your thought is saturated with the fear of failure, it will kill your efforts, neutralize your endeavors and make success impossible.—Boudouin.

Restocking the Famous Madison

By CHARLES L. FUQUA, Fish Culturist in Charge of U. S. Fish Hatchery at Meadow Creek

IT WILL soon be time again to get out the fish rod, replenish the fly book, and start in pursuit of the trout in Montana's lakes and streams. Many of these flies will probably be used on that splendid trout stream, the Madison river. This stream, flowing down from the Yellowstone Park, down through the Madison valley, along the outskirts of the little city of Ennis, may be aptly called the fisherman's paradise.

I wonder how many anglers, when fishing in these waters, will stop to think about the origination and propagation of these finny tribes. The lower Madison Lake, the Madison river and its tributaries are wonderfully adapted to fish propagation as well as to the pleasures of the angler. While high up in the fastnesses of the ranges in the Madison National Forest bordering the Madison valley will be found numerous beautiful lakes and streams, some devoid of fish life and others with large numbers of the aristocratic native cutthroat trout.

The U. S. Bureau of Fisheries, with the cooperation of the State Fish and Game Department and the National Forest Service, is endeavoring to stock all of the virgin lakes and streams with this native cutthroat trout, this fish being well adapted to the clear, crystal streams and lakes found in Montana. The eggs for stocking purposes are

furnished from that wonderful spawning station of the Montana Fish and Game Department at Georgetown Lake, near Anaconda. Many are eyed and hatched at the government spawning station at Meadow Creek, on the shore of Meadow Lake.

All these virgin lakes and streams are above impassable falls, therefore fish in their wanderings have never been able to reach them. The more accessible waters are stocked with fingerlings taken up in cans on pack trains by forest rangers or local ranchers.

The more inaccessible waters are stocked by the planting of the eggs themselves, just before they are ready to hatch. These eggs are packed in ice in especially designed cases, and taken on a pack horse by the rangers and planted on the gravel bars and in sheltered places along the shores of the lakes to be stocked. Some of these lakes will not be reached by the average angler for a number of years, but will supply excellent fishing in years to come. At the same time we are preserving for future generations the native trout of Montana and the Rocky Mountain region.

What could be better than a cutthroat caught in a high mountain lake or stream?

In the lower waters will be found the native Montana grayling, the spec-

tacular and hard-fighting rainbow, and the vigorous, dashing loch leven.

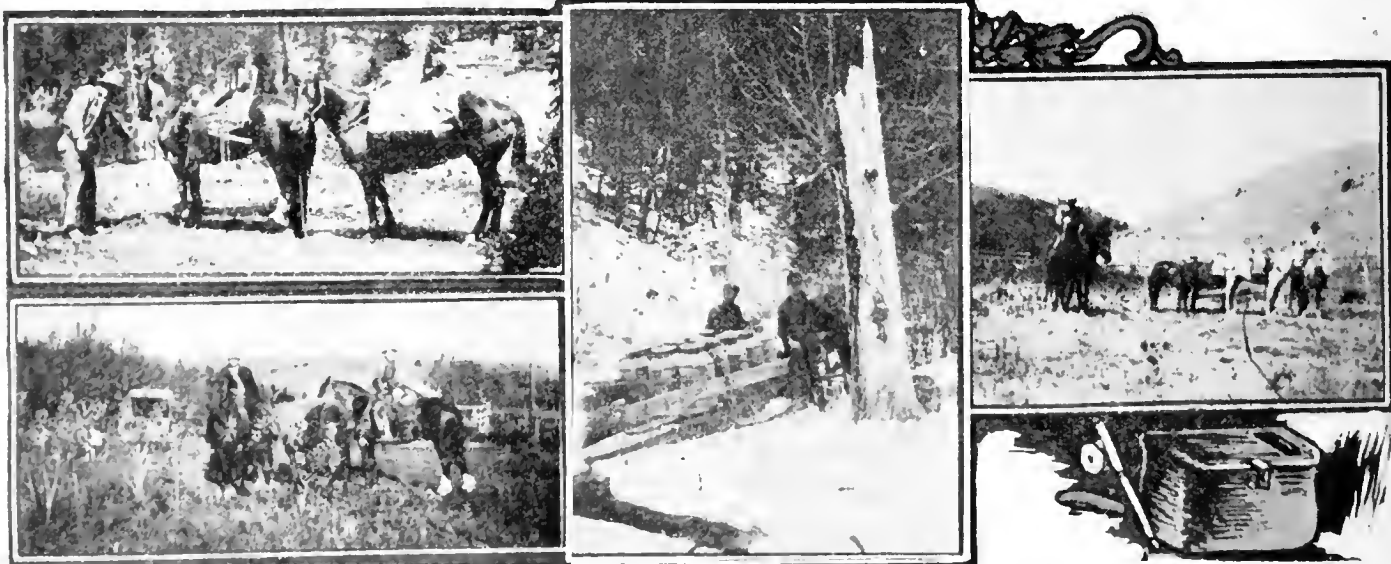
Cast your fly into any of the deep holes in the Madison river from the lake on up past Hutchins to Hebgen Dam and you will have a fight on your hands with one of these gamey fellows. Or perhaps one would rather try his skill from a boat in the lower lake. You will find them there in just as great a number.

The grayling, like the cutthroat, are natives of Montana waters. Fish of this species, planted from the Meadow Creek auxiliary station, are from eggs secured from the Fish and Game Department's spawning station at Georgetown Lake.

The rainbow has been brought from Pacific Coast states and introduced into these waters. This fish has done so well in these waters that the U. S. Bureau of Fisheries operates traps at this station where from three to four million eggs are secured yearly. The resulting fish from some of these eggs are used for restocking the parental waters and other waters in the vicinity. Some eggs are sent to the Bozeman station of the bureau and used for stocking other Montana streams. Eggs are also supplied to the Butte Anglers' Club hatchery and to the bureau's hatchery in Glacier National Park.

The loch leven originally came from Scotland. It can not be claimed, how-

Restocking the Feeder Streams of the Madison River



Upper Left—On the shore of No Man's Land in the Madison national forest Mr. Fuqua is shown preparing to unpack eyed eggs for planting.

Lower Left—Ranger Merryfield of the Forest Service and Charles Fuqua of the Bureau of Fisheries with a pack of eyed native trout eggs preparing to leave the ranger station for No Man's Land in the Madison national forest.

Center—Charles Fuqua with a sled load of fingerlings from the Meadow Creek hatchery in Indian Creek canyon.

At the Right—Ranger Merryfield with a pack of native trout fingerlings.

ever, that this fish in the Madison is of simon-pure strain, but there is something about this name which appeals more strongly to our imagination than does the more possibly correct designation, the European brown trout.

The first loch leven fingerlings were brought from the Bureau of Fisheries station, Spearfish, South Dakota, in 1889, and planted in the Madison river and its tributaries inside the boundaries of Yellowstone Park.

The brown trout were planted in Nez Perce creek (a tributary to the Madison) in Yellowstone Park in 1890.

At the same time fish of these two species were planted in the Gardiner river, a tributary of the Madison river.

By 1915 they were abundant in all those waters. From this small introductive plant came the present tremendous numbers found in the lower Madison Lake and Madison river, where the Meadow Creek spawning station secured fourteen million eggs the past season. In the meantime there had been no planting of these fish until the last few years.

In later years the U. S. Bureau of Fisheries has been restocking heavily with fry and fingerlings. While not preferred by some of the older anglers, this fish is rapidly growing in popularity. This gamey trout will survive the evils of deforestation and pollution better than any other of the salmonidae. The spawning station operated here is the largest loch leven spawning station in the United States. Montana can well be proud of having two of the largest trout spawning stations in the United States, namely, the state station at Georgetown Lake and the government station at Meadow Creek. And right at our back door is the government station on Yellowstone Lake that exceeds Meadow Creek station and rivals the one at Georgetown Lake. This station supplies several million native trout eggs annually for stocking Montana waters.

From two to three million loch leven eggs are furnished the state department at their Big Timber and Great Falls hatcheries, where they are hatched and the fish reared to the fingerling stage before being planted. The bureau is cooperating with the State Fish and Game Department in stocking the Missouri river from Great Falls to Helena with this variety in the belief that this area, especially the three big power reservoirs, will soon become one of the greatest loch leven fishing regions in the world, besides which large numbers of spawn will be available for general use. Before the coming of the thrifty "Scotchman" this area had been greatly depleted of trout owing to deforestation and pollution. Eggs of this specie are also sent to other states where the resulting fish have been found readily adaptable to different conditions.

The waters of the Madison valley are probably as intensively fished as any waters of the Northwest. The way the wonderful fishing now found is maintained is by the judicious planting of the millions of fry and fingerlings hatched yearly.

More Bird Sanctuaries

THE FIRST public report of the National Committee on Wild Life Legislation was made to the Fifteenth National Game Conference at New York in December by Dr. T. Gilbert Pearson, the chairman of the committee. Game Warden Robert H. Hill and Chairman T. N. Marlowe of the State Commission represented Montana at the gathering.

It was urged that the conference support the committee's plan to work for the enactment of the Norbeck bill for the establishment of migratory bird refuges as it passed the senate last spring, with the recommended elimination of the provision requiring that such refuges as the government does establish shall later be turned over to the states for management at the government's expense.

The conference also was urged to approve the committee's plan to secure the elimination of the tariff on game birds imported for stocking purposes.

These recommendations were the result of steps taken at the Seattle Conservation Convention last August to coordinate the efforts of all the large wild life conservation organizations and the state game officials.

The National Game Conference, composed of representatives from practically all organizations and state and federal officials interested in wild life

conservation, unanimously endorsed these recommendations and pledged its hearty support of the committee's plans.

The members of the National Committee on Wild Life Legislation who were in New York for this meeting in addition to Chairman Pearson of the National Audubon Association, were Carlos Avery, president of the American Game Protective Association, New York City; Seth E. Gordon, conservation director of the Izaak Walton League, Chicago; Dr. John C. Phillips, president of the American Wild Fowls, Wenham, Mass.; George D. Pratt, president of the American Forestry Association, New York City; E. Lee LeCompte, State Game Warden of Maryland, representing the International Association of Game, Fish and Conservation Commissioners; Robert H. Hill, State Game Warden of Montana, alternate for R. G. Parvin of Colorado, representing the Western Association of Fish and Game Commissioners; Dr. Harold C. Bryant, representing I. Zellerbach, president of the California Game and Fish Commission; I. T. Quinn, State Game and Fish Commissioner of Alabama; Keith McCause, State Game and Fish Commissioner of Missouri; and Colonel William Mer-shon of Saginaw, Mich., representing Gustavus Pope of Detroit.

Montana Sportsmen Protect the Beaver



Federal Hunter Boyce is shown above alongside a beaver taken on the Marias river and placed in the Beaver Creek game preserve. In the other picture Deputy State Game Warden L. C. Clark, who is stationed at Havre, is shown making preparations to transport beaver to the preserve. They were placed in an ordinary wooden box and made no effort to escape.

THROUGH cooperation with the Havre Rod and Gun Club the State Fish and Game Department has not only successfully transported and planted 26 elk on the Beaver creek game preserve, but 20 beaver have been trapped on the Marias river alive and

transported to the preserve where all are doing well. Mr. Boyce is a government trapper employed in the fight against predatory animals constantly being waged by the State Department in connection with the United States Biological Survey.

Fish Problems at Montana's Hatcheries

By JOHN W. SCHOFIELD, Big Timber, Field Assistant in Charge of Hatcheries in Eastern Division



J. W. Schofield

MONTANA is operating 14 fish hatcheries, a large task when one stops to consider the fact that the resident fishing and hunting license costs \$2 per year. There is no other state in the United States where sportsmen pay so little for a license and get as much for their money. The average hunter or fisherman will spend a minimum of \$50 for his equipment. In Montana

one is allowed to fish 300 days each year and the limit is 40 fish or 20 pounds and one fish per day. In several states the open season for game fish fishing is from 60 to 90 days and the license is higher.

In view of the small population of Montana, most of our streams are in as good shape now, as far as aquatic food conditions are concerned, as they were 20 or 30 years ago. Most of our streams have not been changed by man with pollution of every sort as in the crowded states, or drained dry to furnish water for large cities. Seventy-five per cent of Montana's streams are practically virgin as far as pollution is concerned, and therefore it is reasonable to say the food condition is just as good as 20 years ago.

Twenty years ago in Montana the only stocking the streams received was from natural reproduction. The fish spawned, the eggs hatched, and the fry hatched from these eggs were not six, eight or ten inches long. The results from the hatched eggs were, first, fry, then advance fry, and then fingerlings, one inch, two inches, and so on until they were yearlings, and finally adults. Therefore, if streams were well stocked with fish 20 or 30 years ago under natural reproduction, it would not seem that all the natural reproduction had been eaten up by big fish.

Most fish culturists claim that under natural spawning conditions only ten per cent of the eggs become fertile. Therefore, the natural reproduction does not compare with artificial stocking of the streams as carried on by the hatcheries. A stream will support only so many fish, and streams, like pastures, can be overstocked. Consequently, the fish are starved and the desired results are not obtained. If a stream will not support fingerlings one and two inches long it will not support larger fish. Some eastern states plant a few larger fish, six, eight and ten inches long. They manage to get these fish into the waters before their 60- or 90-day season opens and for the first three or

four weeks fishing is good, but after that fishing is nil.

Conditions in no two states are the same, neither are stream conditions. Therefore it is not feasible to compare conditions in other states with Montana conditions.

The most striking cartoon I ever saw appeared in the Saturday Evening Post some time ago. It depicted an Indian who had been duck hunting coming back with four ducks, which was sufficient for his immediate needs. The other half of the cartoon showed an American sportsman coming back from a duck-hunting trip, but he, unlike the Indian, was loaded down with ducks so that he could hardly walk. The Indian was always a conservationist, while the white man is a depleter. What we need is more real conservation among sportsmen, which would mean smaller bag and creel limits.

Montana has an area of 146,572 square miles, or 94,000,000 acres. The Department has a total of 24 game wardens to patrol these 94,000,000 acres. Some of these wardens have a territory to

patrol equal in size to some of the smaller states. It is the duty of every man, woman or child to tell the nearest game warden about violations. When a violator breaks game laws he is depriving you and your family of its rightful share of game and fish.

The total of the fish food bill for the state fish hatchery at Big Timber from December, 1927, to October, 1928, was \$1,600. The cost of fish food for the 14 hatcheries for a year will run into a sum ranging from \$12,000 to \$14,000. In addition to this expense we must consider the payroll as well as the fleet of trucks necessary to carry on this work. Then comes the maintenance of hatcheries, dwellings, equipment, supplies and other expenses.

Daley Lake, in Park county, is a large fresh water lake fed both by springs and subterranean water. It is full of aquatic life and growth for fish food. This lake covers a territory of 960 acres. Due to the fact that in places there is no bottom, one is led to believe it was an old volcano crater. During the last five years the Depart-

Experts Taking Eggs from Montana Trout



Here are shown the fish experts of the Montana State Fish and Game Commission at work taking spawn from grayling, rainbow and native trout at the spawning station at the mouth of Flint creek where it empties into Georgetown Lake, near Anaconda. The fish, held in the traps while running up the creek to spawn, are dipped out with the long-handled nets, stripped by the staff of experts, the eggs carefully placed in cans and, after being thoroughly cleansed and fertilized, the eggs are then rushed to the hatcheries. Dr. I. H. Treece, veteran fish expert of the Department, is shown bareheaded in the immediate foreground clad in his slicker and waders, up to his waist in the cold water stripping the big fellows. The spawning season usually lasts about six weeks and hundreds of visitors are attracted to the station during the interesting operations.

ment has planted a total of one million fish in this lake. From the face of this amount one would think it would be alive with fish. However, in 960 acres there is a total of 41,817,609 square feet and if these fish were evenly scattered over the surface of this water it would put one fish in each 41 square feet of the surface. Supposing that of the million planted there 50 per cent reached adult size. This would figure one fish to every 82 square feet. So, in figuring this out in square or cubic feet, we find it takes a lot of fish to stock a place of this size well. Wonderful catches are being made in this lake right along and it will not be long before it will be able to hold its own from natural production.

The Department has also heavily stocked Lake Francis near Valier. Fishing in this lake is also good and it will not be long before it will equal Georgetown Lake.

The Madison is considered one of the world-renowned fishing streams. From personal experience and hearsay we all know fishing there is unexcelled. But I wonder if it is realized that 85 per cent of the stocking of this stream consists of planting fry. In other words, when the eggs hatch the fry is allowed to absorb part of the yolk sac and is then planted without having a particle of artificial food.

I am not advocating the general planting of eyed eggs and fry but am



Two fish planting trucks of the fleet maintained by the State Commission illustrating the modern manner in which eggs and fingerlings are handled. The eggs from the spawn-taking station at Georgetown Lake, the largest in the world, are placed in iced cases, loaded in the truck shown at the left, and hurried to the hatcheries. The speedy truck at the right, stationed at Georgetown, is equipped with a special tank, modernized facilities for aerating the water and other devices for preserving fingerlings when taken from hatcheries to streams for planting and restocking. The second of these tank trucks is stationed at the Big Timber hatchery.

endeavoring to show that under good conditions and when properly handled by those who have had the experience good results are obtained.

The entire output from the state's 14 hatcheries will average two inches in length. When fish of this kind are planted properly fine results are gotten, as one must remember that under natural reproduction the eggs are deposited in the spawning beds and hatched in the streams.

The irrigation ditch is a factor with which we have to contend. The toll of fish taken by ditches is far greater than the combined fish taken by the sportsmen and the natural enemies which prey on fish. Fish have their natural enemies in snakes, mink, blue heron, ducks, kingfishers and many others. When all these factors are given due consideration, one will realize that a fish has his ups and downs the same as everything else.

At Red Lodge at the tourist park, on Rock creek, the Department has a 12-trough hatchery and one 60-foot rearing pond. This plant is known as a summer hatchery, one that is run from May until September or October.

At Big Timber, located four blocks northwest of the Northern Pacific depot and supplied with spring water, the Department has a 36-trough hatchery and six 60-foot rearing ponds. This plant is run the year around.

At Emigrant, one mile south of the town and supplied with spring water, the Department has a 14-trough hatchery with four 60-foot rearing ponds. This is a year-around hatchery.

At Lewistown, located six miles up Spring creek and supplied with spring water, the Department has a 12-trough hatchery with three 60-foot rearing ponds. This, like Red Lodge, is a summer hatchery.

At Great Falls, located six miles from Great Falls at the noted Giant Springs, the Department has a year-around 20-trough hatchery and two 100-foot rearing ponds and a third pond to be built.

The combined output of the above five hatcheries for the past season was in the neighborhood of 12,000,000 trout

of the following species: Native trout, rainbow trout, loch leven trout, eastern brook trout and silver and Chinook salmon.

In addition to the above plants the Department has recently completed building in my district a pond cultural station located three miles west of Miles City, on the Fort Keogh reservation. This pond covers 78.9 acres and has an average depth of four feet. It was constructed at a cost of \$16,000. This is for the propagation of bass, crappie, perch and other species suitable for warm water. In November, 1928, a second consignment of 250 pairs of adult brood stock was placed in this pond. During the coming season of 1929 the increase from the brood stock should be encouraging.

The completion of the Gibson dam on the Sun river will make an ideal sportsmen's paradise, but it will take a great deal of stocking before the desired results are obtained. The building of another dam on the Missouri below Great Falls will also add to the fishing waters.



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GOING FAST—VERY INTERESTING

The Great Open Spaces

By KNOX D. MOORE

Editor's Note

KNOX D. MOORE, who is associated with the General Motors Acceptance Corporation at Butte, is the son of W. K. Moore of Billings, member of the State Fish and Game Commission. This article regarding experiences of a Montana angler, as written by Mr. Moore, was published in the General Motors magazine and has since been given greater circulation by being reprinted in other journals.

MONTANA is noted for its fine fishing and hunting, and in and around the locality of Butte there are any number of fine fishing streams. Trout in these streams provide the greatest of sport. One of these beauties, and incidentally they are fine eating, can give a red-blooded sportsman the thrill of a lifetime. There is a knack in hooking one of these elusive creatures, and once hooked the fun begins. If brought to the creel you may consider it a job well done.

It so happens that this writer has any number of ardent fisherman friends from his boss down to the office boy, but chief among them is that man of the outdoors, my friend, Ed. Much has been said, written and pictured of the golf widow, yet little has been said of one of the greatest martyrs to the cause—the patient wife who sits home with her knitting and awaits the return of her fisherman husband. Mrs. Ed. and the writer's wife made one mistake, and that is they married fish bugs.

One day Ed. made the statement that it was too nice to stay inside, and, too, he had a cold and needed to get his feet in that greatest of cures for summer colds, a good cold mountain stream. Having somewhat of a cold myself, I decided it advisable that we hie ourselves to the fishing grounds and proceed to doctor up. With this thought in mind we casually broached the subject to Joe, another ardent sportsman, and right away Joe was terribly stove up, a condition of which we really were unaware.

At 1 p. m. we three, with an assortment of flies and lures which no red-blooded trout could turn down, left this great mining camp for a point of paradise, new to us, but which we had heard was good, known as Canyon

creek. We were instructed to drive to Melrose and inquire our way from there.

At the latter place we were instructed to cross the Big Hole river, turn to the right and drive to Glendale. After numerous inquiries to see if we were on the right trail, we arrived at Glendale. There we were instructed to drive on about 100 yards and turn to the right. We measured this distance but could see nothing that resembled a road. Much to our surprise we learned that a cow trail which appeared to go straight up the side of the mountain was the road, and in the same breath we were informed that when we topped the divide we would drop down into Canyon creek, and how true that man spoke.

A council of war, maneuver, or what have you, was held, and since we were piloting a sturdy car, we decided that if cows could go up there, we could. We did. But what a climb. Two hundred pounds more in the back seat and we would have tipped over backwards. We reached the divide and what that native said about dropping was no joke. If there had been any mud or ice on that side we would have been going yet.

On our way down the writer, who was riding herd on the car, saw what he thought was a large bull snake, but upon closer observation, from his position in the driver's seat, discovered that he was very much in error—it was one of those demons of the western prairies, a rattlesnake, and the granddaddy of them all.

Upon announcing my discovery in no uncertain terms—and apparently my announcement was a huge success—Joe and Ed. were making frantic efforts to get out of our trusty buggy, even to the point of going through the top. Thanks to the sturdiness of the top they were thwarted.

At this point a peculiar slant of human nature arose, and that is the natural instinct of man in time to stress to trust no means of locomotion but his feet.

Don't misunderstand the writer by getting the viewpoint that he was the only brave guy. I have encountered, in my wanderings, numerous rattlesnakes, and that honored phrase that familiarity breeds contempt certainly applied in this case, with no reservations. Also, remember the writer was riding herd on the car.

In due course of time and after the heaving of numerous boulders, this disturber of our peace was dispatched without ceremony. During the battle the snake, after giving numerous warnings with his bzzz-bzzz, decided to run. For some reason he started toward Joe. The snake didn't have a chance of catching Joe, as he was going up-country in nothing flat, handicapped with large red hip boots, but the boots didn't seem to make much difference. Joe is a he-man from the wide open spaces because, even with his handicap of hip boots, high altitude and an up-hill grade, he managed to holler at every jump to Ed. to protect the snake medicine. This serpent measured a good five feet, still had six rattles, the others having been torn off.

After this incident we again started on our descent and reached our goal. Then came a hurried scramble for tackle, as the hour was getting late. Joe was the first equipped and also the first to get a strike. I have fished



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a great many streams in this great state of Montana, but never have I seen as many fish in ice cold crystal pools as I saw in Canyon creek. The bed of this stream is about 20 yards wide, with a stream of water about four feet wide, the rest being brush, the kind that leaves you with less than nothing on as wearing apparel, skin included.

You fish this stream by wading down the middle of it and occasionally a deep hole is encountered, much to the fisherman's discomfort. If you have ever filled the bath tub with ice, let it melt until there is sufficient water to cover you and plunged in, you will have a faint idea of how cold the water in this stream gets.

After several hours of ardent labor and much fun we finally retired to our waiting chariot, took stock of our catch and found we had landed seven trout. They had evidently been feasting for weeks. The hungry ones were certainly few and far between. To make matters worse both Ed. and Joe had lost their fly books. I later discovered they had lost them coming out of the brush at a double quick after having heard that invigorating song of a rattler. Don't laugh, it's a serious matter. I too moved faster than naturally.

Our next task was to scale that mountain and get back to civilization. Thanks to our trusty buggy we accomplished this task. We hurried back home to a glorious meal, the waiting arms of our faithful "widows," a good hot bath and a welcome bed, to dream enraptured dreams of that big one we didn't get.

Pheasants to be Watched by Oregon Game Wardens

THE FARMERS of Oregon will learn within the next 12 months whether or not the Chinese pheasant is valuable to them as a result of an extensive survey inaugurated by the State Game Commission, according to F. M. Brown, deputy state game warden, who is directing the investigation.

According to Mr. Brown, deputy game wardens in ten counties where Chinese

pheasants predominate have been appointed to conduct the investigation. These wardens will secure five birds each month, beginning with June, preparing the stomachs, crops and gizzards for analysis, after which the specimens will be turned over to the Oregon State Agricultural College at Corvallis, where the final examination and analysis will be made and the results tabulated and published. The experiment station at the college is collaborating with the State Game Commission in making the survey. In the college laboratories it will be determined what these game birds eat and in what proportion throughout the entire year.

It is planned by this survey to settle definitely a long standing argument as to the relative benefits or damage to agricultural crops caused by these birds. From time to time complaints reach the game department that Chinese pheasants cause damage to farmers and gardeners by pulling up and

consuming early planted corn, peas and kale, while on the other hand the large majority of farmers declare that the birds are a great benefit to them and that they consume many pests that would cause infinitely more harm than do the pheasants.

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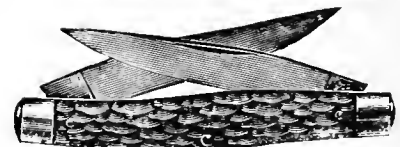


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Montana's Sockeye Salmon

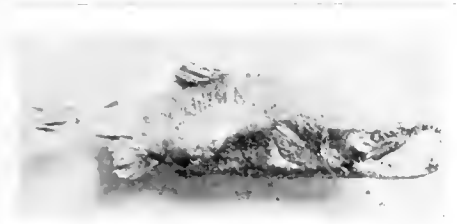
By ELI MELTON, Foreman of Station Creek Hatchery

IN FEBRUARY, 1916, the Montana Fish and Game Commission, through efforts of Judge Walter M. Bickford, who was then a member, secured 200,000 silver trout or land-locked sockeye salmon, the scientific name of which is *Oncorhynchus nerka* (Kennerly). These eggs were secured through L. H. Darwin, then state fish commissioner of Washington. The eggs were hatched and distributed from the Somers hatchery. Their nature would be to return to the ocean and for this reason they were planted in land-locked lakes in

in weight in these waters and it is practically impossible to secure eggs for replanting.

The small plant of this sockeye salmon made in Flathead Lake, and probably augmented by salmon coming down the river from Whitefish Lake in the last twelve years, will prove a wonderful asset to Flathead Lake in the near future. The fish takes a trolling spoon or fly, and when hooked comes out of the water in a series of leaps often three or four feet. They must be handled with care as they have a tender mouth.

Owing to the fact that the parent fish from which the original 200,000 eggs were taken have been land-locked in a lake in Washington and have lost all desire to return to the ocean, they remain in fresh water lakes and propagate. This variety of salmon can be distinguished from other varieties by its long numerous gill rakers, 15 above and 22 below. This salmon dies after spawning as do all salmon. This fall we succeeded in securing about 30,000 eggs on a small spawning bed in the south end of Flathead Lake, but with improved equipment and an earlier start next year we should be able to secure a greater number.



Sockeye Salmon

Flathead county, Rodgers Lake, Lake Blain and Lake Five. Other plants were made in Whitefish Lake, Bitter Root Lake, Lake Mary Ronan, and a few in Flathead. They were planted the one time and have apparently disappeared in some of the named lakes. In Whitefish Lake, Lake Five, and Flathead they have increased. In Lake Blain and Lake Mary Ronan they made the wonderful growth of nine to twelve pounds, and no better pan fish was ever caught.

In Whitefish Lake, Lake Five, and Flathead Lake they seldom reach six pounds in weight. The cause for the growth made in the two lakes is no doubt explained in the fact that the water is slightly warmer and contains an abundance of feed.

In Lake Ronan they soon acquired the name of silver salmon. Everything they touched was covered with silver scales. In the fall of 1918, a little over two years from the time they were planted, they came on the spawning beds in Lake Ronan and we secured about 50,000 eggs which were eyed at the Somers hatchery.

Nearing the time of spawning the male fish becomes greatly distorted. They become deep and thin, acquire a great hump on their back, absorb their scales, become a brick red, and grow a powerful set of teeth and a long, protruding upper and lower jaw. Because of their ferocious appearance they were wrongfully called dog salmon and condemned by many sportsmen. For this reason they were not planted again in streams or lakes.

Subsequent planting of true silver salmon and Chinook salmon has proved that this land-locked sockeye salmon is the better variety. The silver salmon and Chinook seldom reach three pounds

Big Uns in the Big Hole



Deputy Game Warden C. R. Price and a prize catch.

THE Big Hole river in Beaverhead county is gaining fame as a "treasure" stream of the "Treasure" state, according to Deputy State Game Warden Charles R. Price, who is stationed at Dillon. He writes as follows:

"The Big Hole river heads in the famous Big Hole basin in Beaverhead county. It is bordered by Deer Lodge county from the Squaw Creek bridge to the Dickey bridge, by Silver Bow county from the Dickey bridge to Melrose and by Madison county from Melrose to the Garrison place. From this place on it is in Madison county entirely and empties into the Jefferson river below Twin Bridges.

"The Big Hole river may be reached by the Oregon Short Line at Maiden Rock, Melrose, Brown's station and Glen. The Butte to Dillon highway follows this river from Melrose to Glen, making it convenient for fishermen. The river has abundant shade and there are desirable camping sites along the banks. From the first of July until the river freezes it is perhaps one of the most popular big trout streams of the state.

"It has been my experience in fishing for the big ones in the Big Hole river to use a bait casting rod. For the last two years I have won the trophies given for the largest trout caught and exhibited in Beaverhead county. The largest trout shown in the cut won the trophy this year. It was a rainbow weighing eight pounds ten ounces dressed. Last year the prize winning fish weighed twelve pounds six ounces and was also a rainbow. There are also natives and loch leven. I have caught natives that weighed five and six pounds and loch leven weighing seven pounds. Beaverhead county welcomes you."

Minnesota Watches Montana

Editor MONTANA WILD LIFE:

I wish to acknowledge the receipt of the copy of MONTANA WILD LIFE, the January number, and to congratulate you upon the excellence of this publication, both as to contents and make-up. Permit me to say that in my opinion this is one of the most interesting and instructive outdoor publications that has come to my notice—and I have seen them all.

It is evident that Montana sportsmen have awakened to the necessity of effective and concerted work for the preservation of our game and fish, if complete extermination is not to come within a few years.

The predominant idea which seems to prevail in the minds of the majority of men who enjoy hunting and fishing is to kill in the greatest possible numbers, and I believe that the publication of such a magazine as MONTANA WILD LIFE in each of the states, by game and fish commissions, would create a better understanding of the manner in which this work of conservation is carried on and would result most beneficially.

GEORGE D. HAMILTON,
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